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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------------|------------------|
| 10/784,644  | 02/23/2004  | Yuh-Jye Uang         | 7407                           | 8191             |
| 7590 09/28/2004   |             |                      |                                |                  |
| Paul M. Denk<br>Ste. 170<br>763 S. New Ballas Road<br>St. Louis, MO 63141 |             |                      | EXAMINER<br>OGDEN JR, NECHOLUS |                  |
|   |             |                      | ART UNIT<br>1751               | PAPER NUMBER     |

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/784,644 | <b>Applicant(s)</b><br>UANG, YUH-JYE |  |
|                              | <b>Examiner</b><br>Necholus Ogden    | <b>Art Unit</b><br>1751              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: Line 4, after "group" there should be included ---, and--- to better clarify the necessary ingredients and for completeness. Appropriate correction is required.
2. Claim 6 is objected to because of the following informalities: Applicant should include the phrase "selected from the group consisting of" to clarify the Markush group of D.E. grade syrup. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Roe et al (5,079,036).

Roe et al disclose freeze control agents comprising magnesium chloride, propylene glycol, sugar and mixtures thereof (col. 3, lines 10-16). Roe et al further include surfactants and water in said compositions (col. 4, lines 45-60). Note, said brine agents are included in an amount from 10-30% by weight and admixed with 10-500 parts by weight of freeze control agents, surfactants and water (see claims 1, 8, 18 and 19).

As this reference teaches all of the instantly required it is considered anticipatory.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-4 and 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roe et al in view of Bloomer (6,641,753).

Roe et al is relied upon as set forth above. Specifically, Roe lacks a teaching of the specific sweetener component or dextrose.

Bloomer discloses an anti-icing and deicing composition comprising sugar cane or molasses, which comprises approximately 11.5% of dextrose, in an amount from 10-25% (co. 2, lines 10-55 and col. 4, lines 21-29) together with magnesium chloride and glycol compounds (col. 3, lines 15-48).

It would have been obvious to one of ordinary skill in the art to include the molasses component of Bloomer to the compositions of Roe et al because Roe et al invite the use of sugars and Bloomer teaches that molasses inhibits the corrosive properties of many known deicing components, in particular chloride salts and Roe et al require the use of chloride salts. Therefore, one of ordinary skill in the art would have been motivated to include the molasses component of Bloomer to the compositions of Roe et al because beneficial and/or synergistic results would have been obtained, absent a showing to the contrary.

9. Claims 1, 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roe et al (5,079,036) in view of Simendinger, III et al (6,702,953).

10. Roe et al is relied upon as set forth above. Specifically, Roe et al is silent with respect to the specific sorbitol as claimed.

Simendinger, III et al disclose an anti-icing composition comprising propylene glycol, sorbitol, and magnesium chloride (col. 4, lines 25-39).

It would have been obvious to one of ordinary skill in the art to include the sorbitol component of Simendinger, III et al to the compositions of Roe et al because

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Roe et al invite the use of sugars and Simendinger III, et al teaches that sorbitol is well known as a freezing point depression agent. Therefore, one of ordinary skill in the art would have been motivated to include the sorbitol component of Simendinger III, et al to the compositions of Roe et al because beneficial and/or synergistic results would have been obtained, absent a showing to the contrary.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Necholus Ogden whose telephone number is 571-272-1322. The examiner can normally be reached on M-T and Th-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Necholus Ogden  
Primary Examiner  
Art Unit 1751

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